



Achinsk Oil Refinery of Eastern Oil Company JSC

Legal address:

662110 Krasnoyarsk Territory, Bolsheuluisky District, industrial zone of the oil refinery

Place of manufacture: 662110 Krasnoyarsk Territory, Bolsheuluisky District, industrial zone of the oil refinery

e-mail: sekr@achnpz.ni , tel.: 8(39159) 5-33-10

Central Factory Laboratory of JSC ANPZ VNK

662110, Russian Federation, Krasnoyarsk Krai, Bolyisulunsky district, industrial zone of the refinery Joint

Stock Company Achinsk Oil Refinery of the Eastern Oil Company

e-mail: sekr@aclmpz.ru tel.8(39159) 5-33-10

CERTIFICATE No. 889
Broad fraction of light hydrocarbons of grade B

Documents establishing requirements to products:

TS 38. 101524-20 5 "Broad fraction of light hydrocarbons, Specifications"

OKPD Code 2 19,20,32

Batch number: 889

Date of manufacture: 30.11.2021

Batch size (mass): 59.897 t

Sampling location (according to GOST 14921): tank No. E-31

Date of sampling: 30.11.2021

Test date: 30.11.2021

The certificate was issued on the basis of the test report: No. 1021 dated 30.11.2021

No.	Name of the indicator	Testing method:	Norm according to TS 38.1015242015	Actual value
1	Mass fraction of components, %: the amount of C ₁ -C ₂ hydrocarbons including - methane - ethane - propane - the amount of C ₄ -C ₅ hydrocarbons including - the amount of C ₄ hydrocarbons - the amount of C ₅ hydrocarbons - the amount of C ₆ hydrocarbons and higher	GOST 10679-2019	maximum 5.0 not standardized not standardized not standardized minimum 30.0 not standardized definition required not standardized definition required required maximum 40.0	1.51 0.080 1.43 13.5 60.2 45.2 15.0 24.7
2	Mass fraction of methanol, %	TS 38.101524-2015 Appendix A	maximum 0.15	Less than 0.010
3	Mass fraction of hydrogen sulfide and mercaptan sulfur, % including: hydrogen sulfide	GOST 22985-2017	maximum 0.05 maximum 0.003	0.0041 0.0022
4	Free water and alkali content	Item 5.3, TS 38.1015242015	absence definition required	Absence
5	Overall view	Item 5.4 TS 38.1015242015	colorless transparent liquid	colorless transparent liquid
6	Density at 20°C, kg/m ³	GOST 28656-2019	not standardized definition required	581.7

Conclusion:

The broad fraction of light hydrocarbons of grade B meets the requirements:

- TS 38.101524-2015 "Broad fraction of light hydrocarbons. Specifications"

Additional Information:

- the warranty period of storage is 3 months from the date of manufacture;

- marking, transportation and storage - according to GOST 1510;

- aggregate state at a temperature of 20°C and a pressure of 760 mmHg - gaseous;

Safety Data Sheet No. 05747206.19.46775 Valid until 15.06.2022

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Shift Supervisor /signature/ *Chumaylova D.V./*

Certificate issue date: **30.11.2021**

stamp: / Achinsk Oil Refinery of Eastern Oil Company JSC * Russian Federation Krasnoyarsk Krai * FOR DOCUMENTS /

COPY

Joint Stock Company Achinsk Oil Refinery of Eastern Oil Company JSC

Legal address:

(JSC ANPZ VNK)

662110, Russian Federation, Krasnoyarsk Territory,
Bolsheuluisky District, industrial zone of the oil refinery
Tel. (39159) 5-33-10, E-mail: sekr@achnpz.ru

Central Factory Laboratory

662110, Russian Federation, Krasnoyarsk Territory,
Bolsheuluisky District, industrial zone of the oil refinery, title 175
Tel. (39159) 5-32-73, E-mail: EBGusarova@anpz.rosneft.ru

Unique number of entry in the Register of Accredited Entities: **RA.RU.21AB49**

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APPROVED BY

Acting Head of the Central
factory laboratory of JSC ANPZ VNK
(position)

signature

(signature)

30.11.2021

(date of approval)

E.B. Gusarova

(initials, surname)

TEST REPORT

No. 1021 dated 30.11.2021

Name of the test sample (type, grade, sort): Broad fraction of light hydrocarbons of grade B

Regulatory document establishing requirements for the sample: TS 38.101524-2015 "Broad fraction of light hydrocarbons. Specifications"

Information about the customer (name and contact customer data): JSC ANPZ VNK, 662110, Russian Federation, Krasnoyarsk Territory, Bolsheuluisky District, industrial zone of the oil refinery, Tel. (39159) 5-33-10

Information about the manufacturer (name and contact manufacturer data): JSC ANPZ VNK, 662110, Russian Federation, Krasnoyarsk Territory, Bolsheuluisky District, industrial zone of the oil refinery, Tel. (39159) 5-3310, E-mail: sekr@achnpz.ru

Information about the selection of sample: sample provided by the customer

PCL (plant central lab) is not responsible for the stage of the selection of this sample and the information provided by the customer

Sampling location: JSC ANPZ VNK, workshop No. 17, PSG and NE, TANK E-31, lifting 100 m3

Regulatory document for sampling (name, cipher): GOST 14921 "Liquefied hydrocarbon gases. Sampling techniques"

Date of sampling: 30.11.2021

Environmental conditions during sampling: -
(to be specified if necessary)

Sampling act: -
(to be specified if necessary)

Date of the sample receipt: 30.11.2021

Sample registration number: 776 Test date(s): 30.11.2021

Test results

No. Item No.	Name of the indicator, unit of measurement	RD on the test method (cipher)	Standard according to the ND	Result of testing	Uncertainty / error of the test result	Note
1	Mass fraction of components, %:	GOST 10679-20] 9				
	- the amount of C ₁ -C ₂ hydrocarbons including methane		maximum 5.0	1.51	0.4	
	- ethane		not standardized	0.080	0.017	
	- propane		not standardized	1.43	0.13	
	- the amount of C ₄ -C ₅ hydrocarbons including		minimum 30.0	60.2	1.1	
	- the amount of C ₄ hydrocarbons		not standardized definition required	45.2	1.2	
	- the amount of C ₅ hydrocarbons		not standardized definition required	15.0	0.8	
	- the total of hydrocarbons C ₆ and higher		maximum 40.0	247	1.1	
2	Mass fraction of methanol, %	TS 38.101524-2015 Appendix A	maximum 0.15	Less than 0.010		
3	Mass fraction of hydrogen sulfide and mercaptan sulfur, %	GOST 22985-2017	maximum 0,05	0.0041		
	including: hydrogen sulfide		maximum 0.003	0.0022		
4	Free water and alkali content	Item 5.3, TS 3S.101524-2015	Absence	Absence		
5	Overall view	Item 5.4, TS 38.101524-2015	colorless transparent liquid	colorless transparent liquid		
6	Density at 20°C, kg/m ³	GOST 28656-2019	not standardized definition required	581.7		

Responsible for the design and verification of the test report:
 Shift engineer of the PCL / signature / E.I. Tsivanyuk
 (position) (signature) (initials, surname)

Date of issue of the test report: 30.11.2021

Appendices:

- Appendix 1 Regulatory documents for test methods

The protocol data apply only to the sample subjected to the tests.

The test report may not be partially or completely reproduced without the written permission of the Central Factory Laboratory.

The central factory laboratory is responsible for all the information provided in the test report, except in cases when the information is provided by the customer.

Information marked "if necessary" shall be entered into the test report if available.

--- End of the test report ---

Regulatory documents for test methods

RD (Regulatory Documentation) cipher	Name of RD
GOST 10679-2019	Liquefied hydrocarbon gases. Method of determination of hydrocarbon composition
GOST 22985-2017	Liquefied hydrocarbon gases. Method for determination of hydrogen sulfide, mercaptan sulfur and carbon monoxide
GOST 28656-2019	Liquefied hydrocarbon gases. Calculation method for determining the density and pressure of saturated vapors
TSU 38.101524-2015	Broad fraction of light hydrocarbons. Specifications"